



its root system, and quickly form dense stands. Each fragmented piece of root, 0.25 inch or larger, is capable of forming new plants. The key to controlling Canada thistle is to eliminate seed production and to reduce the plant's nutrient reserves in its root system through persistent, long-term management.

Canada thistle is one of the most troublesome noxious weeds in the U.S. It can infest diverse land types, ranging from roadsides, ditch banks, riparian zones, meadows, pastures, irrigated cropland, to the most productive dryland cropland. Large infestations significantly reduce crop and cattle forage production and native plant species. It is a host plant to several agricultural pests and diseases. Canada thistle prefers moist soils, but it can be found in a variety of soil types. It has been found at elevations up to 12,000 feet.

Effective Canada thistle control requires a combination of methods. Prevention is the most important strategy. Maintain healthy pastures and rangelands, and continually monitor your property for new infestations. Established plants need to be continually stressed. Management options become limited once plants begin to produce seeds. Details on the back of this sheet can help to create a management plan compatible with your site ecology.

Canada thistle (*Cirsium arvense*) is a non-native, deep-rooted perennial that spreads by seeds and aggressive creeping, horizontal roots called rhizomes. Canada thistle can grow 2 to 4 feet in height. The leaves are oblong, spiny, bright green, and slightly hairy on the undersurface. Unlike other noxious biennial thistles which have a solitary flower at the end of each stem, Canada thistle flowers occur in small clusters of 1 to 5 flowers. They are about 1 cm in diameter, tubular shaped, and vary from white to purple in color.

Canada thistle emerges from its root system from late April through May. It flowers in late spring and throughout the summer. It produces about 1,000 to 1,500 seeds per plant that can be wind dispersed. Seeds survive in the soil for up to 20 years. Additionally, Canada thistle reproduces vegetatively through



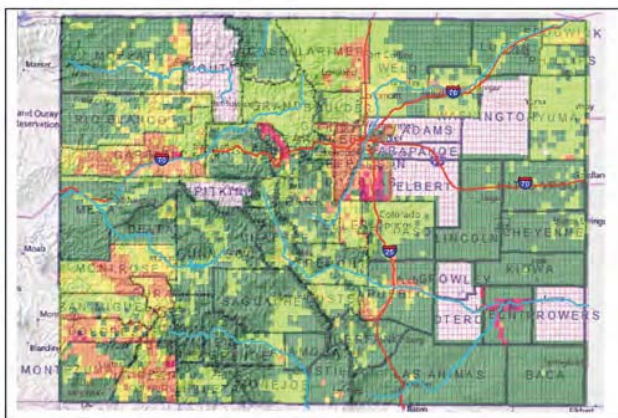
Canada thistle
Cirsium arvense

2013 Quarter Quad Survey

Canada Thistle
Cirsium arvense

2013 Quarterquad Survey
Distribution and Abundance
in Colorado

129,572+ Infested Acres



Distribution Legend: 0 acres 1-10 acres 11-50 acres 51-300 acres 301-999 acres >1000 acres Not Reported
Acreage estimates supplied by County Weed Coordinators and compiled by the Colorado Department of Agriculture.

Canada thistle is designated as a “List B” species as described in the Colorado Noxious Weed Act. It is required to be either eliminated, contained, or suppressed depending on the local infestations. For more information visit www.colorado.gov/ag/weeds and click on the Noxious Weed Program link or call the State Weed Coordinator at the Colorado Department of Agriculture, Conservation Services Division, (303) 869-9030.

Key ID Points

1. Cluster of 1-5 white to purple flowers on a stem.
2. Floral bracts are spineless.
3. Small flowers that are 1 cm in diameter.
4. Perennial, rhizomatous plant with spiny, oblong, green leaves.

Integrated Weed Management Recommendations

Integrated weed management is imperative for effective Canada thistle control. This weed needs to be continually stressed, forcing it to exhaust root nutrient stores, and eventually die. Mowing or grazing can be followed up with herbicide application. Avoid hand-pulling and tilling which can stimulate the growth of new plants.



CULTURAL

Prevention is the best control strategy. Maintain healthy pastures, riparian areas, and rangelands. Prevent bare ground caused by overgrazing, and continually monitor your property for new infestations. Establishment of select grasses can be an effective control.

BIOLOGICAL

Cattle, goats, and sheep will graze on Canada thistle when plants are young and succulent in the spring. Follow up grazing with a fall herbicide application. Insects are available, and provide limited control. Currently, collection and distribution methods for Canada thistle rust (*Puccinia punctiformis*) are being refined. For more information on Canada thistle biocontrol, contact the Colorado Department of Agriculture - Palisade Insectary at (970) 464-7916.

MECHANICAL

Due to Canada thistle's extensive root system, hand-pulling and tilling create root fragments and stimulate the growth of new plants. Mowing can be effective if done every 10 to 21 days throughout the growing season. Combining mowing with herbicides will further enhance Canada thistle control.

CHEMICAL

The table below includes recommendations for herbicides that can be applied to rangeland and some pastures. Treatments may be necessary for an additional 1 to 3 years because of root nutrient stores. Always read, understand, and follow the label directions.

Herbicide	Rate	Application Timing
Aminopyralid* (Milestone)	5-7 oz. product/acre + 0.25% v/v non-ionic surfactant OR 1 teaspoon product/gal water + 0.32 oz./gal water	Apply in spring at the pre-bud growth stage until flowering and/or to fall regrowth. Can also add chlorsulfuron (Telar) at 1 oz./acre to the mix.
Clopyralid + Triclopyr (Prescott; Redeem; others)	3 pints product/acre + 0.25% v/v non-ionic surfactant OR 1.25 oz. product/gal water + 0.32 oz./gal water	Apply until flowering and/or fall regrowth.
Aminocyclopyrachlor + chlorsulfuron (Perspective)*	5.5 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply to spring rosette to flower bud growth stage; or fall. IMPORTANT: Applications greater than 5.5 oz. product/acre exceeds the threshold for selectivity. DO NOT treat in the root zone of desirable trees and shrubs. Not for use on grazed or feed forage.

Note: *Product not permitted for use in the San Luis Valley.

Additional herbicide recommendations for this and other species can be found at:
www.colorado.gov/agconservation/CSUHerbicideRecommendations.pdf

Canada thistle

Cirsium arvense